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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,090	11/06/2001	Akira Kumazawa	10891-009001	7470

26211 7590 11/18/2003

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EXAMINER

HAMILTON, CYNTHIA

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,090

Applicant(s)

KUMAZAWA ET AL.

Examiner

Cynthia Hamilton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/22/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Faust et al (4,245,030). With respect to instant claim 10, Example 1a and Example 3a of Faust et al teach most of the instant photosensitive composition wherein the polymerizable polyurethane obtained in Example 1a is by reaction 11 moles of diisocyanate with 10 moles of triethylene glycol and reacting the product of this with 2 moles hydroxyethyl methacrylate and wherein Example 3a has such ratios as to yield isocyanate groups for reaction with the hydroxyl group of the methacrylate compound used. The excess of diisocyanate means that the first reaction product is terminated with isocyanate groups that then react with the hydroxyl group of the methacrylate. Styrene is the benzene containing monomer in the terpolymer which inherently has an value of from 50 mg KOH/g to 250 mg KOH/g as taught as normal by Faust et al in col. 4, lines 56-65. There is no monomer present at 20 parts or less per 100 parts of a+b+c in the working examples of Faust et al as found in instant claim 10. The diurethane methacrylate of Example 1a is present in too

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large an amount to qualify as the instant monomer. However, in the paragraph bridging col. 4-5 the addition of a di (meth) acrylate, i.e. the instant monomer of which several choices are acrylates or dimethacrylates of polyethylene glycol or polypropylene glycol such as polyethyleneglycol-diacrylates and the diacrylate urethanes made from diethyleneglycol, tripropylene glycol, etc, is taught by Faust et al. In col. 5, lines 47-55, from 10-70 weight percent based on the non-volatile components of the composition are preferred optional components. With respect to instant claim 10, the range of monomer added to the compositions of Faust et al that overlaps that of the instant (d) monomer would be prima facie to use with the polyurethane compositions of Faust et al to form etching and electroplating photoresists. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). As to "for sandblasting" in the instant claim language, the examiner has taken this to be directed to the intended use of the composition and not as a structural limit on the claim language. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Faust et al (4,245,030) as applied to claim 10 above, and further in view of Celeste (3,469,982). Faust et al in col. 1, disclose the group of dry photopolymerizable photoresists inclusive of Celeste that are

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cited to show the types of materials known to be useful in the etching and electroplating art. It is to the improvement of such systems that Faust et al is drawn. Thus, with respect to instant claim 11, the use of an additional cover layer over the photoresist materials of Faust et al coated on polyester substrates as taught in Celeste in col. 2 to protect the photopolymerizable material as disclosed in col. 3 of Celeste would have been prima facie obvious. Celeste notes protection from lint, dust and other dirt in col. 10, lines 19-50.

5. Applicant's arguments filed September 22, 2003 have been fully considered but they are not persuasive. Applicants argue that the cited art does not disclose or suggest the pending claims. The examiner has addressed this allegation above with respect to Faust and Celeste. The rejection is made in view of the new amendments with the addition of where the newly amended material is supported. The rejection stands. All other rejections of the last office action have been considered and found moot in view of applicant's amendments of September 22, 2003.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cynthia Hamilton whose telephone number is (703) 308-3626. As of December 12, 2003, this telephone number will be 571-272-1331. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff can be reached on 703-308-2464. As of December 12, 2003 this phone number will be 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.



**CYNTHIA HAMILTON
PRIMARY EXAMINER**

Primary Examiner Cynthia Hamilton

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November 16, 2003